

AMENDED CLAIMS DURING THE INTERNATIONAL PHASE

1. Method for irradiating objects with infrared radiation, in particular in order to dry surface layers and/or fix them in place, wherein a radiation source (10) is moved by means of a robot (1) into one or several operating positions in which the particular target object is irradiated, characterized in that the radiation is emitted by a thermal radiator (12) with a surface temperature of more than 2000 K, in particular more than 2500 K, and the infrared radiation has a spectral radiance maximum in the near infrared.

2. Method according to Claim 1, wherein the radiation source (10) is moved continuously within a range of operating positions in such a way that the infrared radiation sweeps over one or several regions on the surface of the target object.

3. Method according to Claim 1 or 2, wherein at least one operating position is chosen such that the infrared radiation is directed into a recess or into a cavity in the target object.

4. Method according to one of the claims 1 to 3, wherein irradiation of the target object is preceded by the beginning of application of a material that is disposed on the surface and/or in joints, cavities or similar recessed spaces in the target object and that is dried and/or fixed by the irradiation.

5. Method according to Claim 4, wherein the application of the material is also performed by a robot, which moves an application device into one or several operating positions.

6. Method according to Claim 5, wherein the sequence of movements of the robot used for application and that of the robot (1) used for irradiation are the same, at least in part, and/or the two robots' movement paths are at least partially congruent.

7. Method according to one of the claims 1 to 6, wherein a plurality of target objects are irradiated consecutively by the same radiation source (10), such that the same robot (1) moves the radiation source (10) and from the standpoint of the target objects the radiation source (10) progresses through the same movement path in each case.

8. System for irradiating objects with infrared radiation, in particular in order to dry surface layers and/or fix them in place, with

a radiation source (10) operating in the near infrared to generate the infrared radiation and

a robot (1) to move the radiation source (10) into one or several operating positions, in which the target object is irradiated, wherein the radiation source (10) is combined with a reflector (13) to reflect infrared radiation from the radiation source (10) in the direction of one or several target objects, and wherein the reflector (13) can be moved together with the radiation source (10) by the robot (1).

9. System according to Claim 8, wherein the robot (1) comprises a holder (6) to contain the radiation source (10), such that the holder (6) is connected, by way of a pivotable and/or linearly movable robotronic mechanism (2...6), to a supporting device (7) to keep the robot (1) stably supported in a fixed location.

10. System according to Claim 9, wherein the robotronic mechanism (2...6) can be swivelled about multiple axes of rotation, in particular six axes.

11. System according to one of the claims 8 to 10, wherein the reflector can be moved independently of a movement of the radiation source, in particular can be folded upward, in such a way that in an operating position it can be directed so as to concentrate the irradiation onto the target object or objects.

12. Application of a halogen lamp (10) as a radiation source in carrying out the method according to one of the claims 1 to 7, such that the halogen lamp (10) together with a reflector (13) is moved by a robot (1) into one or several operating positions in which the particular target object is irradiated.